

# EUROPEAN PATENT OFFICE

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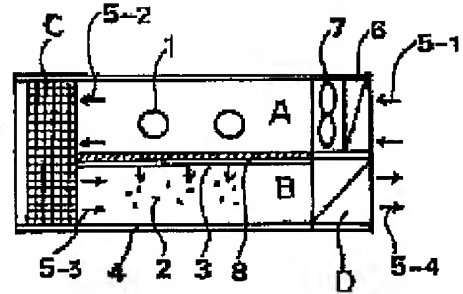
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TITLE : METHOD AND APPARATUS FOR  
HARMFUL COMPONENT REMOVAL  
FROM AIR



**ABSTRACT :** **PROBLEM TO BE SOLVED:** To provide a method and an apparatus, which effectively generates photoelectrons for a long time without deteriorating a function of a photoelectron emitting material, for removal of harmful components contained in the air.

**SOLUTION:** In an apparatus having an ultraviolet ray source 1, a finely granulating part A to finely granulate harmful components, a charging part B to charge the fine particles by photoelectrons 2, and a collecting part D to collect the charged fine particles to remove harmful components contained in air; the ultraviolet ray source 1 radiative both ultraviolet rays with 200nm or shorter wavelength and 250nm or longer wavelength is installed in the finely granulating part A and an ozone decomposing part C in which an ozone decomposing member is set is installed while being connected with the ultraviolet ray source 1. Then, ultraviolet rays from the ultraviolet ray source 1 are irradiated to the charging part B through a photoelectron emitting material which is a short wavelength ultraviolet ray cutting filter 8 coated with a photoelectron emitting substance 3 and installed between the finely granulating part A and the charging part B for the fine particles. As the ozone decomposing material, a mixed oxide type catalyst may be used and as the ultraviolet ray cutting filter, glass which absorbs short wavelength ultraviolet rays may be used.

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